Bio4270 History of Biology Dr Ehrlich's Magic Bullet

Dr. Paul Ehrlich's dream was to create out of chemicals "Magic Bullets" with which to fight the scourges of mankind. What is meant by the term "Magic Bullet"? How would he use them benefit mankind? – 1:09

Sweat baths offer no value. Why would they offer treatment that has not affect on the illness? Do you think it is right for Dr. Ehrlich to disregard his superior's orders? What does this say about his character? -4:43

Dr. Ehrlich is shown smoking in the Lab, something that would not be tolerated today. How have Lab standards changed from his time to now? – 10:09

What is being shown on the blood slide? Can you see specific structures? - 11:46

How does specific staining work? Explain what structures having an affinity for a dye means? - 12:54

Dr. Ehrlich's colleague had a problem with "people of his faith in our profession". Why does the film never directly state his faith? Do you think that Dr. Ehrlich faced prejudice for being Jewish? Do you think characters in the film treat him differently because of this? - 13:38

What does Dr. Ehrlich's boss's attitude tell you about his character? What are his main concerns and how does he think the hospital should be run? – 14:00

What methods were used to get these images of Tuberculosis and why would it be useless to the average doctor? How would staining the bacteria make diagnosing cases of TB mush easier? Why is this important? -17:41

Dr. Ehrlich is simply handed a culture of a highly dangerous disease. Why is this potentially very unsafe? What rules and regulations are in place today for working with dangerous microbes? – 20:49

What did the heat do to "fix" the dye? Explain the process that allows the microbe to be seen after heat fixation? - 24:36

Dr. Ehrlich is said to be "No medical doctor". What do they mean by this? - 29:48

Why does Dr. Ehrlich go to Egypt to recover from his infection? - 31:44

How does the snake bite incident effect Dr. Ehrlich? Why is the father's immunity to snake bites over time so important? 33:46

What is Diphtheria? The Serum for treating it worked on other animals by not people. Why is this the case? -38:22

They discuss how blood must product something over time to combats disease. What are they describing? Compare their theory to what we know about the immune system today. – 39:54

How are Dr. Ehrlich and Dr. von Behring producing a serum with more antibodies? Is this method effective and/or practical? – 40:26

Is it a good idea to only giving the serum to half the people to test the effectiveness? Does this make sense from a logical perspective? Was Dr. Ehrlich right to treat all the patients regardless? – 44:08

The hospital Head sarcastically askes if they're "Doctors or old women?". How much should emotional or moral reasoning be considered when conducting medical research? – 48:45

What is "Side Chain Theory"? What is thought of it today? - 53:38

Why are they injecting different animals with infectious diseases? Why are some animals used for certain tests and not other? – 57:30

Racism is expressed by the medical board toward Dr. Hata, one of Dr. Ehrlich's researchers. What does this say about the attitudes of the time? What does Dr. Ehrlich's defence of Dr. Hata tell you about him? – 59:20

What is so important about these two germs having similar shapes. What does it say about their affinity? - 1:01:30

What is the graph Dr. Ehrlich's is making? What is being measured? -1:04:45

Why is the reaction to working with syphilis so dramatic? Why might discussing it be taboo? -1:13:45

Note Dr. Ehrlich's concerns about the safety of his treatment. Compare this to how he acted in the past. Did he lose touch or close off his heart as his colleague suggests? Is this situation different than the previous one? -1:24:44

How might large scale production for a medical treatment hurt its quality? Is this still a concern today? - 1:27:53

Is Dr. Wolfert's opposition to Dr. Ehrlich purely professional or could there be personal reasons for it? -1:31:47

Science is about seeking truth and there is "no shame attached to the recognition of error." Is this a widely accepted and expressed attitude? Discuss recognitions of error in relation to science and how it different from other fields - 1:37:07

What are considered acceptable risks or sacrifices? Is this something that can be quantified? -1:38:10

What is Dr. Ehrlich talking about when he mentions diseases of the soul? How do diseases of the soul and body feed on each other? How is this shown in the movie? -1:41:10